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A COMPARISON OF JOB ATTITUDES  
BETWEEN AIR FORCE SYSTEMS COMMAND  
ACQUISITION OFFICERS AND ALL  
OTHER AIR FORCE OFFICERS

THESIS

Edward C. McMahon Captain, USAF

AFIT/GSM/LSR/89S-29

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COMMAND ACQUISITION OFFICERS AND ALL OTHER  
AIR FORCE OFFICERS

THESIS

Presented to the Faculty of the School of Systems and  
Logistics of the Air Force Institute of Technology  
Air University  
In Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in Systems Management

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Captain, USAF

September 1989

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Abstract

The purpose of this study was to compare the job attitudes of Air Force Systems Command (AFSC) acquisition officers and all other Air Force Officers. The results of the Leadership and Management Development Center's Organizational Assessment Package (OAP) survey were used as the data source for this study. In order to determine how the job attitudes of AFSC acquisition officers compare with other Air Force officers, two comparison groups were extracted from this data source and statistically analyzed: one group was representative of AFSC acquisition officers and the other group was representative of all the Air Force officers represented in the data source. In 18 of the 21 factors which describe the structure of the OAP, AFSC acquisition officers were found to be significantly lower than other Air Force officers. Also, the acquisition career field was found to be comprised of a large percentage of junior officers. These demographic results and the significantly lower job characteristics factors of the OAP were found to help cause the relatively negative job attitudes of AFSC acquisition officers.

A COMPARISON OF JOB ATTITUDES BETWEEN AIR FORCE  
SYSTEMS COMMAND ACQUISITION OFFICERS AND ALL  
OTHER AIR FORCE OFFICERS

I. Introduction

Chapter Overview

This chapter contains a general introduction to the measurement of job attitudes and summarizes the results of earlier job attitudinal studies among Air Force Systems Command acquisition officers. Further, it provides a definition of the specific problem addressed in this study and the organization of this report.

General Issue

Lots of jobs are not so well designed. They demotivate people rather than turn them on. They undermine rather than encourage productivity and work quality. They just aren't any fun.

[Hackman and Oldham, 1980:p. ix]

The quantification of what job characteristics induce positive job attitudes, job satisfaction, and motivation in the work environment has been intensely studied by organizational psychology for decades. For example, McGregor stated that certain physical, social, and egoistic needs are the things that people are striving to satisfy

throughout their lives, whether they may be on the job or off the job" (1966:41).

Understanding the level of fulfillment of these characteristics and job attitudes of the workers within an organization is a key facet in order to improve an organization's outputs. In the United States Air Force, specifically Air Force Systems Command, where outputs are defense systems necessary for the protection of our country, an understanding of the relevant job attitudes of its workers is essential.

#### Background

The study of job attitudes is not new, but relatively little research has been conducted involving Air Force officers. In fact, only two studies involving Air Force Systems Command (AFSC) acquisition officers, Air Force Specialty Code 27XX, are available. One of these studies found that AFSC project managers, located at Eglin AFB, were less effective at communication and management tasks than other AFSC officers (Banks, 1982). The other study found "AFSC project managers' job attitudes were generally less favorable than those of other Air Force officers at large" (Radov, 1986:42). Radov concluded that demographic variables are primarily responsible for the less than favorable job attitudes of AFSC acquisition officers compared to the job attitudes of the overall Air Force officer population (Radov, 1986:42).

### Statement of the Problem

The overall problem for this study was to determine the job attitudes of AFSC acquisition officers. These job attitudes are defined as the feelings a person has concerning the job characteristics related to his or her work.

In order to determine the job attitudes of AFSC acquisition officers, a means of comparing their job attitudes with that of the overall Air Force officer population was necessary. Being a member of the United States Air Force may in itself have an effect on the job attitudes of an acquisition officer. Therefore, the job attitudes of the overall Air Force officer population can be used as an appropriate referent.

The Air Force Chief of Staff's Leadership and Management Development Center's (LMDC) Organizational Assessment Package (OAP), discussed in depth in Chapter 2, contains job attitudinal data representative of the entire Air Force population. A subset of this data base containing job attitudinal information on over 21,000 Air Force officers was chosen as the data source for this research. Also since Radov used a similar data source for his research, the use of the Organizational Assessment Package is optimal for an extension of Radov's findings.

Chapter II, the Literature Review, will detail the development of the Organizational Assessment Package. Also, the Literature Review will discuss the development of the Job

Characteristics Model which was included in the creation of the OAP.

#### Research Questions

To accomplish the research problem of determining the job attitudes of AFSC acquisition officers, the Organizational Assessment Package was analyzed to answer the following research questions:

- 1) Is there a significant difference between the job attitudes of AFSC acquisition officers and other Air Force Officers?
- 2) What specific job characteristics cause the positive or negative job attitudes of AFSC acquisitions officers?
- 3) What potential areas are there for improvement in the acquisition officer career field? Can those job characteristics which cause negative job attitudes be corrected or alleviated?

#### Limitations

Several limitations must be considered in this study. First of all, the Organizational Assessment Package used as the data base for this study was last administered in 1985. Any changes in the job attitudes of AFSC acquisition officers since that time were not incorporated in this research. Secondly, acquisition officers are assigned to other major commands such as the Air Force Logistics Command. The job attitudes of these acquisition officers are integrated with the job attitudes of other Air Force officers. Finally, the

data used in this research was obtained using a survey instrument. The weaknesses of any survey instrument, such as as possibly false information given by the respondents, must be considered in this research (Emory, 1985:227).

Organization of this Report

This chapter presented an introduction to the concept of job attitudes and delineated the problem addressed in this study. Chapter two presents a literature review of the development of Hackman and Oldham's Job Characteristics Model and the Organizational Assessment Package (OAP). Chapter three will describe the methodology utilized and chapter four will detail the results of this study. Finally, chapters five and six will examine some theoretical implications and discussion which can be made from the results of this study.

## II. Literature Review

### Chapter Overview

This chapter discusses the development of Hackman and Oldham's Job Characteristics Model and Job Diagnostic Survey, the Organizational Assessment package, and the results of Radov's research introduced in Chapter 1. It first describes various types of job characteristics, examines the job characteristics theory, and discusses Hackman and Oldham's Job Characteristics Model and Job Diagnostic Survey. Then, it presents the development and structure of the Organizational Assessment Package which included the Job Characteristics Model and Job Diagnostic Survey in its creation. Finally, the results of Radov's research, utilizing the Organizational Assessment Package, are presented.

### Various Job Characteristics

Determining the specific job characteristics that will describe and encompass the values which constitute job satisfaction, job attitudes, and employee motivation has been a major challenge in the development of a job characteristics theory. Organizational behaviorists have been defining various appropriate job characteristics for years.

The Herzberg theory (1959) emphasized job characteristics ... and suggested jobs with opportunities for achievement, recognition, responsibility, advancement, and growth in competence are those that enhance motivation and job satisfaction. [Wanous, 1974:616]

Also, 'the Turner and Lawrence (1965) six 'requisite task attributes' (i.e., variety, autonomy, required and optional interaction, knowledge and skill required, and responsibility)' represent another approach which emphasizes job characteristics (Wanous, 1974:616).

Hackman and Lawler detailed three general job characteristics that:

1. The job must allow a worker to feel personally responsible for a meaningful portion of his work.
2. The job must provide outcomes which are intrinsically meaningful or otherwise experienced as worthwhile to the individual.
3. The job must provide feedback about what is accomplished.

[Hackman and Lawler, 1971:266]

Porter and Steers defined four 'factors' in the work environment 'in an effort to break down the global concept of job satisfaction' (Porter and Steers, 1973:151). These four factors and their elements are presented in Table 1.

As can be seen in Table 1, there are factors which are not completely related to the work environment. 'Individuals may develop positive or negative feelings about their work due to factors wholly unrelated to any set of work characteristics' (Adler, Skov, and Salvemini, 1985:274). Studies which have independently manipulated both objective

task or job characteristics and 'socially mediated cues' have shown that objective job characteristics have accounted for 'a greater percentage of the variance in subsequent attitudes and perceptions than do social cues' (Adler et al., 1985:275).

Table 1 - Work Environment Factors

Factors	Elements
Organization-wide	Pay and Promotions Organizational Size
Immediate Work Environment	Supervisory Style Peer-group Interaction
Job-related	Overall reaction to job content Task repetitiveness Job Autonomy and Responsibility Role Clarity
Personal	Age Length of Service Similarity of Job with Vocational Interest Personality Characteristics Family Responsibilities

[Porter and Steers, 1973:151]

Even if social cues are omitted in the development of a job characteristics theory and only job or task characteristics are used, the particular facets or characteristics used in the foundation of a job

characteristic theory will be influenced by individual referents to external or social environmental attributes (Oldham, et al., 1986:43-45).

#### Job Characteristics Theory

The use of various job characteristics is the basis for the job characteristics theory. "The theory explains that in order to improve on motivation, satisfaction, and productivity, the job should be designed with certain attributes (characteristics)" (Geiser, 1986:17).

Job characteristics theory has its roots in a major study by Arthur Turner and Paul Lawrence (1965) that examined the relationship between certain objective attributes of task and employees' reactions to their work. [Hackman and Oldham, 1980:58]

The Turner and Lawrence study predicted that higher job satisfaction and motivation would occur under the proper amount of work variety, autonomy, skill and knowledge required, and the amount of responsibility given to the worker (Hackman and Oldham, 1980:58).

The Job characteristics theory can be summarized as an indicator of a worker's Motivating Potential Score (MPS) and represented by the following empirical equation:

$$\text{MPS} = ((\text{Skill Variety} + \text{Task Identity} + \text{Task Significance})/3) \\ \times \text{Autonomy} \times \text{Feedback}$$

[Hackman and Oldham, 1975:160]

As can be seen from this equation, any change in a particular job characteristic should result in a perceived variance of

the workers' MPS or motivation and job satisfaction (Hackman and Oldham, 1975:160).

### Job Characteristics Model

Utilizing the Turner and Lawrence (1965) study and research conducted by Hackman and Lawler (1971), Hackman and Oldham developed a Job Characteristics Model. This model (see figure 1) explains the interrelationship between the job characteristics or dimensions, the critical psychological states, and the personal and work outcomes of the individual worker (Hackman and Oldham, 1980:97).

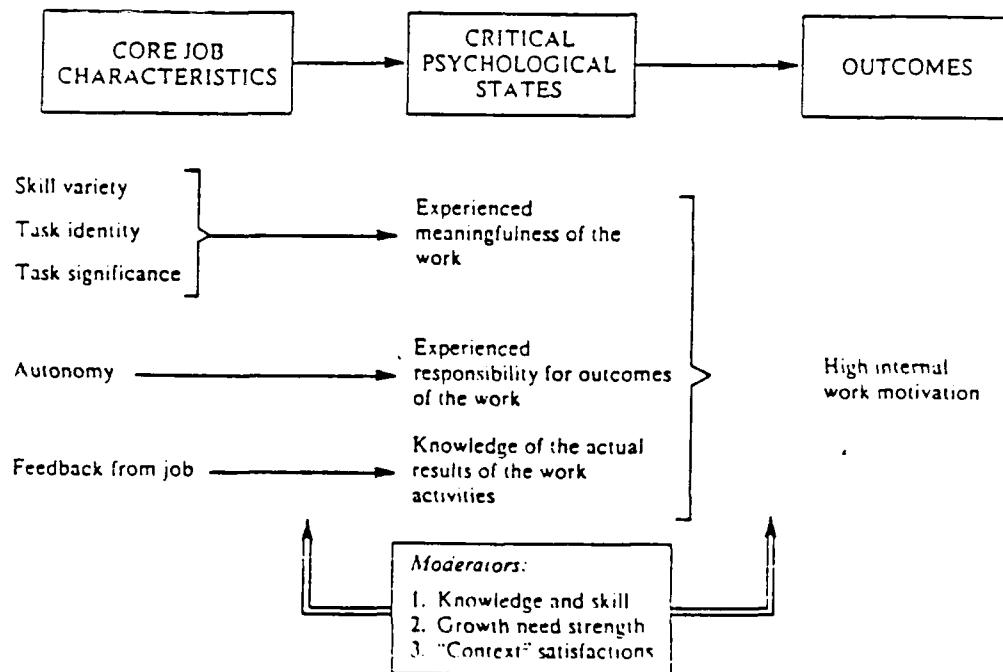


Fig. 1. Job Characteristics Model  
(Hackman and Oldham, 1980:83)

The five core job characteristics of the model are defined as follows:

1. Skill variety: The degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the employee.
2. Task identity: The degree to which the job requires completion of a 'whole' and identifiable piece of work—that is, doing a job from beginning to end with a visible outcome.
3. Task significance: The degree to which the job has a substantial impact on the lives or work of other people—whether in the immediate organization or in the external environment.
4. Autonomy: The degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out.
5. Feedback from the job itself: The degree to which carrying out the work activities required by the job results in the employee obtaining direct and clear information about the effectiveness of his or her performance.

[Hackman and Oldham, 1975:161-2]

The three critical psychological states of the model are defined as follows:

1. Experienced meaningfulness of the work: The degree to which the employee experiences the job as one which is generally meaningful, valuable, and worthwhile.
2. Experienced responsibility for work outcomes: The degree to which the employee feels personally accountable and responsible for the results of the work he or she does.
3. Knowledge of results: The degree to which the employee knows and understands, on a continuous basis, how effectively he or she is performing the job.

[Hackman and Oldham, 1975:162]

The personal outcomes of the job characteristics model are high internal motivation, growth satisfaction and general job satisfaction. The work outcomes are organizational effectiveness, low absenteeism, and low turnover (Hackman and Oldham, 1980:89).

As Figure 1 indicated, the job characteristics model not only incorporates specific job characteristics, it includes the psychological states of the worker and the outcomes resulting from the interrelations between these facets of the model. The study of such variables is the backbone of organizational psychology and is beyond the scope of this literature review. However, analyses such as the relationship between autonomy and job satisfaction (Farh and Scott, 1983:203) and intentions to quit and job satisfaction (Steel and Ovalle, 1984:673) are examples of specific relationships between variables which are inherent in the job characteristics model.

#### Job Diagnostics Survey

Using their job characteristics model as a basis, Hackman and Oldham developed a Job Diagnostic Survey (JDS). The JDS is 'an instrument designed to measure the key elements of the job characteristics theory.' It consists of various questions with the following format (Hackman and Oldham, 1980:275):

### SAMPLE QUESTION

To what extent does your job require you to work with mechanical equipment?

The intended uses of the JDS are to measure employee job characteristics, satisfaction, motivation, and determine if and how employee jobs may be redesigned in order correct any negative measurements (Hackman and Oldham, 1975:159).

## Introduction to the Organizational Assessment Package

This literature review has surfaced a key point. The determination of the exact job characteristics that define the variables which catalyze employee job attitudes is not specifically agreed upon in the organizational psychological community. However, the Hackman and Oldham Job Characteristics Model seems to be to represent the dominant philosophy.

The Organizational Assessment Package (OAP) was created to provide a tool for consultation services across a broad range of personnel topics (Doty 1987:34). Studies such as Radov's, which have utilized the OAP, show the utility of the OAP to measure job attitudes of military personnel. Furthermore, since the OAP was developed and based on various motivational theories, such as the Job Characteristics Theory and Hackman and Oldham's Job Characteristics Model, shows the

utility of such theories to help quantify the job attitudes of military personnel (Radov, 1986:15).

#### Organizational Assessment Package

The Organizational Assessment Package (OAP) was created and developed by the Air Force Chief of Staff's Leadership and Management Development Center (LMDC). The purpose of the OAP was to aid the LMDC in its mission to conduct research on Air Force systematic issues, provide leadership and management training to Air Force personnel, and provide management consultation service to Air Force commanders upon their request. LMDC used the OAP to gather personnel attitudes in reference to organizational environment, including the goals, and objectives (Horton, 1986:11,12).

The OAP is a survey instrument which resulted in responses from over 100,000 civilians, officers, and enlisted personnel at over 100 Air Force installations (Huffine, 1986:111). It consists of 93 job attitudinal and 16 demographic questions (Appendix A). These questions yield responses on a seven-point Likert scale (Radov, 1986:15).

The OAP is currently in the control of the USAF Manpower and Personnel Center and archived at the Air Force Human Resource Laboratory in Brooks AFB, Texas.

The OAP can be characterized in a hierarchical fashion. It consists of four organizational functions which are broken down into 21 contributing factors which are, in turn, broken down into various survey statements and questions. The four

organizational functions of the OAP and their respective contributing factors are presented in Table 2.

Table 2 - Organizational Functions and Contributing Factors of the OAP

Organizational Function	Contributing Factors
The Work Itself	Job Performance Goals Task Characteristics Task Autonomy Work Repetition Desired Repetitive/ Easy Tasks Job Related Training
Job Enrichment	Skill Variety Task Identity Task Significance Job Feedback Need for Enrichment Job Motivation Index
Work Group Process	Work Support Management Supervision Supervisory Communications Organizational Communications
Work Group Output	Pride Advancement/Recognition Perceived Productivity Job Related Satisfaction General Organization Climate

[Huffine, 1986:59]

The OAP can also be grouped in terms of the three aspects of a work group: input, process, and output (Mahr, 1982:23). The contributing factors of this grouping are presented in Table 3.

Table 3 - OAP Factors Structured in the Work Group Process

Process	Contributing Factors
Input	Job Performance Goals Skill Variety Task Identity Task Significance Job Feedback Task Autonomy Work Repetition Need for Enrichment Desired Repetitive/Easy Tasks Job Related Training
Process	Performance Barriers/Blockages Leadership Supervisory Communications Climate Organizational Communications Climate
Output	Pride Advancement/Recognition Work Group Effectiveness General Organizational Climate Job Related Issues Job Related Training

[Mahr, 1982:24]

The input factors of the OAP Work Group Process can be correlated to the job characteristics represented in the job characteristics theory. In fact, the five OAP factors (skill variety, task identity, task significance, task autonomy, and job feedback) are based directly on the five core job characteristics of Hackman and Oldham's Job Characteristics Model (Hendrix, 1979:8).

Radov's Research

As stated in Chapter 1, the purpose of this study was to determine the job attitudes of Air Force Systems Command acquisition officers. Major Radov's 1986 Air Command and Staff College study represents the most recent and comprehensive research of AFSC acquisition officers job attitudes. Therefore, an appreciation of Radov's results is necessary.

Major Radov used the results of the Organizational Assessment Package survey as the basis for his study. His analysis utilized a sample of 352 AFSC acquisition officers and 10,671 Air Force officers and found that AFSC acquisition officers measured lower in 16 of the 21 contributing factors of the OAP, see Table 4, (Radov, 1986:32).

Radov concluded that demographic variables are primarily responsible for the less than favorable job attitudes of AFSC acquisition officers compared to the job attitudes of the overall Air Force officer population (Radov, 1986:42). Acquisition officers were found to be younger, have less time in their career field, and supervise fewer personnel than other Air Force officers represented in his data source (Radov, 1986:24).

Table 4 - OAP Factors and Radov's Results Summarized

Factor	Acquisition Officers Mean	Other Officers Mean
Job Performance Goals	4.33	4.76***
Task Characteristics	4.93	5.38***
Work Repetition	3.65	4.36***
Desired Repetitive/ Easy Tasks	2.28	2.49***
Job Related Training	4.03	4.76***
Skill Variety	5.11	5.46***
Task Identity	4.86	5.26***
Task Significance	5.08	5.85***
Job Feedback	4.55	4.92***
Job Motivation Index	116.94	126.90*
Supervisory Communications Climate	4.71	4.89***
Organizational Communications Climate	4.55	4.94***
Work Support'	4.66	4.54***
Pride	4.95	5.54***
Advancement/Recognition	4.44	5.62***
Work Group Effectiveness	5.62	5.79***
General Organization Climate	4.86	5.27***

\* p < .05      \*\*\* p < .001

'Note Acquisition officers scored significantly higher

(Radov, 1986:27-28,30-31)

### Chapter Summary

This literature review discussed various job characteristics, Hackman and Oldham's Job Characteristics Model, the Organizational Assessment Package, and the results of Radov's analysis of the job attitudes of AFSC acquisition officers.

Hackman and Oldham's Job Characteristics Model centered upon five core job characteristics which were directly utilized in the development of the Organizational Assessment Package. These five job characteristics were; skill variety, task identity, task significance, autonomy, and job feedback.

The methodology for this research presented in the next chapter will place emphasis on these five job characteristics as a determinant for a comparison of job attitudes between Air Force Systems Command acquisition officers and all other Air Force officers.

### III. Methodology

#### Chapter Overview

This chapter describes the methodology used to accomplish the objective of quantifying the job attitudes of Air Force Systems Command (AFSC) acquisition officers.

#### Research Instrument Selection

In order to determine if there is a significant difference between the job attitudes of AFSC acquisition officers and that of the overall Air Force officer population, a reliable and valid source of job attitudinal information is necessary. This information must not only be representative of AFSC acquisition officers, it must contain job attitudinal data representative of the Air Force officer population as a whole. The results of the Organization Assessment Package (OAP), developed by the Air Force Chief of Staff's Leadership and Management Development Center (LMDC), was chosen as the data source for this research.

Since the OAP contains data representative of over 100,000 civilians, officers, and enlisted personnel, its volume of job attitudinal data vastly surpasses the breadth of coverage possible with a personally constructed survey. Even though the OAP was last administered in 1985, the tradeoff of currency for the large sample of attitudinal data and subsequent accuracy is considered warranted.

Furthermore, the OAP is a result of several revisions designed to create a reliable survey instrument which measures organizational effectiveness (Doty, 1987:34). It was developed in accordance with generally accepted standards of reliability and validity (Mahr, 1982:9). In fact, results of reliability tests indicate that the OAP shows generally acceptable to excellent reliability (Short and Hamilton, 1981:28).

Short and Hamilton calculated both a Cronbach's Alpha Coefficient, an indicator of internal consistency, and a Pearson Product Moment Correlation, an indicator of stability over time, for each of the OAP factors. Table 5 presents a highlight of their results for the OAP factors which are emphasized in this study.

A Cronbach's alpha coefficient of .70 or more was considered acceptable. Also, the higher the Pearson product moment correlation coefficient the greater the stability and reliability (Short and Hamilton, 1981:1-10). Although Short and Hamilton's reliability results did present some weaknesses in the OAP, their conclusion did support the OAP survey instrument as 'quite reliable enough to provide a source of real time Air Force systemic data' (Short and Hamilton, 1981:28).

Table 5 - Reliability Measures of  
Job Characteristics Model Factors

Contributing Factor	alpha	r
Skill Variety	.81	.86
Task Identity	.58	.76
Task Significance	.79	.88
Task Autonomy	.85	.69
Job Feedback	.66	.51

alpha = Cronbach's Alpha Coefficient  
r = Pearson Product Moment Correlation Coefficient

(Short and Hamilton, 1981:11,17)

The complete Organizational Assessment Package is archived at AFHRL. However, a subset of the OAP containing the responses from over 21,000 Air Force officers is resident at the Air Force Institute of Technology. It is this data which was analyzed in this study.

Objective

The objective of this methodology was to verify and build upon the findings of Radov, presented in Chapter 2, with emphasis on the five factors representative of the job characteristics theory in order to determine the job attitudes of Air Force Systems Command acquisition officers.

### Data Analysis

The data analysis procedures which follow were utilized to determine whether there is a significant difference between the job attitudes of AFSC acquisition officers and that of the overall Air Force officer population.

Comparison Groups. In order to examine the job attitudes of AFSC acquisition officers, two independent comparison groups were extracted from this data source. The first group was data representative of 615 AFSC acquisition officers performing the duties in the project management career field (Air Force Speciality Code 27XX). The second group was composed of 19,636 other Air Force officers representative in the data source.

Demographic Analysis. A major contributor of job attitudes is demographic variables. Therefore, the two above comparison groups were first analyzed to determine the gender, age, grade, time in service, educational level, ethnic background, and career intent of each group.

Analysis of Organizational Assessment Package Factors. The procedures utilized in this phase of the study consisted of a three step process. First, all 21 of the OAP variables were analyzed to verify Radov's results. Second, the five job characteristic factors (skill variety, task identity, task significance, autonomy, and job feedback) were specifically analyzed. Finally, the individual questions contributing to the five job characteristics factors were

analyzed to isolate their contribution to each subject factor.

For all three steps, the OAP data base was analyzed utilizing an analysis of variance (ANOVA) procedure of the Statistical Analysis System (SAS), a statistical software package installed on a VAX 11/785 computer.

Analysis of Variance (ANOVA) Procedure. An ANOVA procedure tests the presence of relationships between predictor and criterion variables (Kachigan, 1986:272). In this study, two predictor variables, the comparison groups, and multiple criterion variables were used. For example, in the first step of the analysis of the OAP factors, 21 factors or criterion variables were utilized. The ANOVA procedure determines if the two comparison groups are significantly different for the 21 OAP factors.

ANOVA Assumptions. The performance of an analysis of variance procedure requires the fulfillment of three assumptions. First, the two comparison groups must be independent. Second, an equality of variance of the two groups is necessary. An F-test was used to test this assumption. Finally, both groups must be theoretically normally distributed (Ott, 1988:414). Due to the large size of the sample of respondents, the data should satisfy this assumption because of the Central Limit Theorem (McClave and Benson, 1985:256).

Chapter Summary

This chapter discussed the methodology involved in the analysis of a subset of the OAP data source in order to determine the job attitudes of Air Force Systems Command acquisition officers.

#### IV. Results

##### Introduction

The results of a comparison of job attitudes between Air Force Systems Command Acquisition (AFSC) officers and all other officers are presented in this chapter. Responses from the Organizational Assessment Package (OAP) survey are used as the data source for this analysis. The primary purpose of this research was to quantify the job attitudes of AFSC acquisition officers and identify any specific job characteristics that are reflected by positive or negative job attitudes. Once these characteristics or factors of the OAP are identified, some specific questions which contribute to these factors are identified and examined to find possible reasons for any divergent attitudes between AFSC acquisition officers and other Air Force officers and indentify any potential areas for improvement.

This chapter is divided into four sections. The first section contains demographic information on both the acquisition officers and other officers represented in the OAP. The second section presents the results of an analysis of all the factors in to OAP in order to verify Radov's results. The third section presents the results of an analysis of the five OAP factors synonymous with the five "core" job characteristics of Hackman and Oldham's Job Characteristics Model. Finally, the results of an analysis

of the specific questions which contribute to these factors is presented.

#### Section One: Demographic Information

The results of any survey research are best understood when one has an appreciation for the number and characteristics of the respondents in the survey. This section presents the demographic information of the respondents to the OAP survey used for this research.

Sample Size. The number of respondents in both comparison groups is presented in Table 6. In some cases the number of responses to individual questions were less than the total number of respondents indicated in Table 6. This is common to most survey results due to invalid responses and missing data.

Table 6 - Number of Respondents

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AFSC	Acquisition Officers	Other Officers
<u>n=</u>	615	19,636

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Gender. Table 7 presents the sex of both comparison groups. Although the number of females represented in the acquisition career field is only 51, the percentage of female officers in the acquisition career field, 8.31%, is fairly close to the percentage of other female officers represented in the OAP, 12.76%.

Table 7 - Acquisition Officers and All Other Officer Characteristics by Gender

Sex	Acquisition Officers n (%)	Other Officers n (%)
Male	563 (91.69)	17075 (87.13)
Female	51 (8.31)	2522 (12.87)

Age. Table 8 shows that approximately 50% of the acquisition officers are 20 to 30 years old, with 33.8% of these officers being 20 to 25 years old. Clearly, the acquisition career force is much younger than the other officers represented in the OAP. There is also a small percentage of 31 to 35 year olds, indicating a tendency towards two distinct groups of acquisition officers; a younger group (20-25 yrs) and an older group (36-45 yrs). On the other hand, the comparison group is comprised of mostly of 26-40 year old officers, 73.1%.

Grade. Similar to the age comparison, a comparison of grades shown in Table 9 indicates a tendency towards a stratification of the acquisition career force. As the table shows, approximately 26.3% of the acquisition officers are second lieutenants compared to only 9.9% of the other officers. Also, only 21.4% of the acquisition officers are captains compared to 41.3% in the other career fields. Furthermore, there is a higher percentage of lieutenant

colonels and colonels in the acquisition career field compared to the other career fields.

Table 8 - Acquisition Officers and All Other Officer Characteristics by Age

Age	Acquisition Officers		Other Officers	
	n	(%)	n	(%)
20 to 25 Yrs	214	(34.9%)	2304	(11.8%)
26 to 30 Yrs	110	(18.0%)	5526	(28.3%)
31 to 35 Yrs	64	(10.4%)	4802	(24.6%)
36 to 40 Yrs	114	(18.6%)	3947	(20.2%)
41 to 45 Yrs	94	(15.2%)	2072	(10.6%)
46 to 50 Yrs	18	(2.9%)	655	(3.4%)
>50 Yrs	0	(0.0%)	218	(1.1%)

Table 9 - Acquisition Officers and All Other Officer Characteristics by Grade

Grade	Acquisition Officers		Other Officers	
	n	(%)	n	(%)
O-1	160	(26.3%)	1921	(9.9%)
O-2	107	(17.6%)	3205	(16.5%)
O-3	130	(21.4%)	8023	(41.3%)
O-4	105	(17.2%)	3481	(17.9%)
O-5	70	(12.6%)	2052	(10.6%)
O-6	30	(5.1%)	717	(3.7%)
>O-6	0	(0.0%)	12	(0.1%)

Time in Air Force. Table 10 shows that 40.6% of the acquisition officers have 4 or less years in the Air Force, while only 23.2% of the other officers have less than four

years of service. This high percentage of relatively inexperienced acquisition officers corresponds to the high percentage of young lieutenants shown in Tables 8 & 9.

Table 10 - Acquisition Officers and All Other Officer Characteristics by Time in Air Force

Time in Air Force	Acquisition Officers n (%)	Other Officers n (%)
< 1 Yr	67 (10.9%)	614 (3.1%)
1 to 2 Yrs	74 (12.1%)	1034 (5.3%)
2 to 3 Yrs	59 (9.6%)	1500 (7.7%)
3 to 4 Yrs	49 (8.0%)	1413 (7.2%)
4 to 8 Yrs	88 (14.3%)	4284 (21.9%)
8 to 12 Yrs	40 (6.5%)	3379 (17.2%)
> 12 Yrs	237 (39.9%)	7379 (37.6%)

Education Level. Table 11 indicates that the education level of the acquisition officers is roughly comparable to the other comparison group of officers.

Ethnic Group. Both the acquisition officer and other officer comparison groups appear to have approximately the same ethnic distribution (Table 12). Therefore, no bias in this respect would be expected in the results of this research.

Table 11 - Acquisition Officers and All Other Officer Characteristics by Education Level

Education Level	Acquisition Officers	Other Officers
	n (%)	n (%)
Non H.S. Grad	0 (0.0%)	2 (0.0%)
H.S. Grad or GED	0 (0.0%)	14 (0.1%)
< 2 Yrs College	0 (0.0%)	40 (0.2%)
At least 2 Yrs College	0 (0.0%)	270 (1.4%)
Bachelors	332 (54.0%)	10427 (53.2%)
Masters	267 (43.4%)	7058 (36.0%)
PHD	16 (2.6%)	1782 (9.1%)

Table 12 - Acquisition Officers and All Other Officer Characteristics by Ethnic Group

Ethnic Group	Acquisition Officers	Other Officers
	n (%)	n (%)
Indian/Alaskan	3 (0.5%)	126 (0.6%)
Asian/Pacific	15 (2.5%)	279 (1.4%)
Black	36 (5.9%)	1053 (5.4%)
Hispanic	22 (3.6%)	456 (2.3%)
White	519 (85.2%)	17227 (88.1%)
Other	14 (2.3%)	414 (2.1%)

Career Intent. According to Table 13, the career intent of both comparison groups appears to be similar. About half of all the officers represented in the OAP intend on making the Air Force their career.

Table 13 - Acquisition Officers and All Other Officer Characteristics by Career Intent

Career Intent	Acquisition Officers n (%)	Other Officers n (%)
Plan to Retire		
Within 12 Months	32 (5.2%)	624 (3.2%)
Career	269 (44.0%)	9920 (50.8%)
Likely Career	120 (19.6%)	4345 (22.2%)
Maybe Career	129 (21.1%)	2940 (15.0%)
Likely Not Career	43 (7.0%)	1093 (5.6%)
Will Terminate/Separate As Soon As Possible	18 (3.0%)	625 (3.2%)

#### Demographic Summary

An obvious result of the demographic analysis is that the acquisition comparison group is comprised of a younger force with a tendency towards a stratification of the field. There are simply not as many middle grade acquisition officers compared to other Air Force officers represented in this study's data source. Otherwise, the two comparison groups seemed to be fairly similar.

#### Section Two: All 21 Factors

A particular factor in the Organizational Assessment Package is a combination of a series of questions. For example, the Skill Variety factor is an arithmetic average of questions number 17 and 29 of the OAP survey. Furthermore, the OAP can be structured according to the organizational functions of the OAP as discussed in Chapter 2. As a

reminder, Skill Variety is a contributing factor to the organizational function of Job Enrichment. The results presented in this section will be in accordance with such a structure.

Tables 14, 15, 16, and 17, present the results of an analysis of variance procedure on all 21 of the OAP factors. Each of the tables presents the results for an organizational function of the OAP.

It must be noted that in this ANOVA procedure the program only considers those respondents who answered to every item. Therefore, all the respondents to the OAP are not utilized in this section: 310 acquisition officers and 10081 other officers are the respective sample sizes utilized in this procedure.

The Work Itself. Five of the six factors which constitute the Work Itself organizational function of the OAP measured significantly lower for AFSC acquisition officers (Table 14). The OAP factors of Job Performance Goals, Task Characteristics, Work Repetition, Desired Repetitiveness/Easy Tasks, and Job Related Training were all lower for acquisition officers. The only exception was the Task Autonomy factor which measures the degree to which the job provides freedom to perform the work as one sees fit.

The results shown for each of these five factors indicates a particular facet of the acquisition officer's Work Itself which is significantly lower than other Air Force officers. The Job Performance Goals factor shows that the

goals of an acquisition officer are less challenging, clear, specific, realistic, and understandable. The Task Characteristics factor measures a combination of the skill variety, task identity, task significance, and job feedback of a particular job; each of these concepts is discussed in a later section. The factors of Work Repetition and Desired Repetitiveness/Easy Tasks show that the acquisition officer has less repetitive work and desires such. Finally, the Job Related Training factor shows that the acquisition officer is

Table 14 - ANOVA of OAP Factor Scores  
 The Work Itself Factors  
 AFSC Acquisition Officers vs All Other AF Officers

Factors	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
<hr/>					
Job Performance Goals	4.23	0.98	4.76	0.98	95.42**
Task Characteristics	4.76	1.03	5.37	0.94	131.68***
Task Autonomy	4.54	1.23	4.54	1.36	0.0
Work Repetition	3.66	1.34	4.41	1.36	94.25***
Desired Repetitiveness/ Easy Tasks	2.40	0.94	2.52	1.05	3.99*
Job Related Training	4.08	1.52	4.78	1.47	69.53***
<hr/>					
	*p<.05	**p<.01	***p<.001		

less satisfied in the on-the-job and technical training provided in the work environment.

Job Enrichment. Table 15 shows that acquisition officers measure significantly lower in the Job Enrichment factors of Skill Variety, Task Identity, Task Significance, Job Feedback, and the Job Motivation Index. These results show that acquisition officers jobs utilize fewer skills and talents, require less work completion from beginning to end, are less important, and provide insufficient information on good or bad performance compared to other Air Force officers. The Need for Enrichment factor shows that acquisition

Table 15 - ANOVA of OAP Factor Scores  
Job Enrichment Factors  
AFSC Acquisition Officers vs All Other AF Officers

Factors	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
Skill Variety	4.94	1.40	5.48	1.26	55.92***
Task Identity	4.70	1.26	5.26	1.21	79.25***
Task Significance	5.00	1.44	5.84	1.23	155.42***
Job Feedback	4.47	1.21	4.91	1.17	45.56***
Need for Enrichment	6.02	0.84	6.06	0.87	0.67
Job Motivation Index	106.61	62.47	126.70	68.80	26.52***

\*p<.05

\*\*p<.01

\*\*\*p<.001

officers have similar desires for opportunities in their job as other officers.

Work Group Process. The results shown in Table 16 indicate that acquisition officers have less guidance from superiors and less communication with their leadership. Furthermore, the interaction and communication of the acquisition officer's organization is lower than other officers. Table 16 also shows the results of the only factor which is significantly higher for acquisition officers, the Work Support factor. This factor indicates that acquisition officers have sufficient tools and facilities to perform their required work.

Table 16 - ANOVA of OAP Factor Scores  
Work Group Process Factors  
AFSC Acquisition Officers vs All Other AF Officers

Factors	Acquisition Officers		Other Officers		F
Work Support'	4.71	0.95	4.53	1.09	8.1**
Management Supervision	5.12	1.35	5.38	1.32	11.93***
Supervisory Communication	4.69	1.43	4.95	1.41	10.96***
Organizational Communications	4.55	1.22	4.97	1.27	32.64***

\*p<.05      \*\*p<.01      \*\*\*p<.001

'Note Acquisition officers scored significantly higher

Work Group Output. AFSC acquisition officers measured significantly lower in all four factors of the Work Group Output organizational function of the OAP. Acquisition officers have less individual pride, organizational pride, feeling of promotability and accomplishment, and job satisfaction.

Table 17 - ANOVA of OAP Factor Scores  
Work Group Output Factors  
AFSC Acquisition Officers vs All Other AF Officers

Factors	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
Pride	4.84	1.51	5.54	1.37	83.36***
Advancement/ Recognition	4.44	1.17	4.62	1.20	7.63**
Perceived Productivity	5.65	1.08	5.84	1.06	10.11**
Job Related Satisfaction	5.23	1.04	5.41	1.09	8.27**
General Organizational Climate	4.88	1.26	5.26	1.26	27.59***

\*p<.05      \*\*p<.01      \*\*\*p<.001

#### Section Two Summary

The results presented in section two showed that in 14 of the 21 OAP factors AFSC acquisition officers were significantly lower than other Air Force officers at the .001

level of confidence; 18 of the 21 factors were significantly lower at the .05 level of confidence. The Task Autonomy and Need for Enrichment factors were the only factors which were not significantly different between the two comparison groups. In only one factor, Work Support, were acquisition officers significantly higher than other officers.

### Section Three: Job Characteristics Model Factors

Table 18 shows the results of a similar ANOVA procedure to that performed in section two with the five factors corresponding to the 'core' factors in Hackman and Oldham's Job Characteristics Model. The utilization of just these factors rather than all 21 OAP factors increases the usable

Table 18 - ANOVA of OAP Factor Scores  
Job Characteristics Model Factors  
AFSC Acquisition Officers vs All Other AF Officers

Factors	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
Skill Variety	4.93	1.40	5.48	1.26	104.46***
Task Identity	4.74	1.27	5.27	1.21	101.95***
Task Significance	5.03	1.44	5.85	1.23	243.68***
Task Autonomy	4.56	1.23	4.59	1.36	0.31
Job Feedback	4.51	1.21	4.94	1.17	72.94***

\*p<.05

\*\*p<.01

\*\*\*p<.001

sample size for the ANOVA procedure to 566 acquisition officers and 18518 other officers. This will result in a substantial improvement in the power of the results presented in Table 18.

#### Section Four: Specific Questions

The five 'core' Job Characteristic Model factors presented in section three were subsequently examined one at a time to determine the relative strength of the individual OAP questions which contributed to each of these five factors.

The range of possible responses for each question was from '1' to '7' or from 'Not at all' to 'To a very great extent'. A listing of all the OAP questions is contained in Appendix A.

Skill Variety. Table 19 presents the results of the analysis of the individual questions which contribute to the Skill Variety factor. These two questions, designated I17 and I29, were stated as follows in the OAP survey:

I17) To what extent does your job require you to do many different things, using a variety of your talents and skills?

I29) To what extent does your job require you to use a number of complex skills?

Table 19 shows that not only do acquisition officers utilize a less variety of their talents and skills than other Air Force officers, acquisition officers perform much less complex duties, more monotonous things, than other Air Force officers.

Table 19 - Skill Variety Questions Comparison

Factor/Question	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
Skill Variety	4.93	1.40	5.48	1.26	104.46***
I17	5.29	1.48	5.66	1.35	42.49***
I29	4.57	1.55	5.30	1.46	137.66***

\*p<.05      \*\*p<.01      \*\*\*p<.001

Task Identity. Table 20 presents the results of the analysis of the individual questions which contribute to the Task Identity factor. These two questions, designated I18 and I28, were stated as follows in the OAP survey:

I18) To what extent does your job involve around doing a whole task or unit of work?

I28) To what extent does your job provide you with the chance to finish completely the piece of work you have begun?

The results for question I18 indicate that the acquisition officer's job involves a significantly less involvement in a whole task or unit of work than other Air Force officers. Also, the acquisition officer has even less chance to completely finish that unit of work (I28).

Table 20 - Task Identity Questions Comparison

Factor/Question	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
Task Identity	4.74	1.27	5.27	1.21	101.95***
I18	4.83	1.46	5.30	1.42	60.16***
I28	4.66	1.47	5.23	1.37	95.94***

\*p<.05      \*\*p<.01      \*\*\*p<.001

Task Significance. Table 21 presents the results of the analysis of the individual questions which contribute to the Task Significance factor. These two questions, designated I19 and I27, were stated as follows in the OAP survey:

I19) To what extent is your job significant, in that it affects others in some important way?

I27) To what extent does doing your job well affect a lot of people?

The results shown in Table 21 indicate that AFSC acquisition officers feel that performing well in their job does not affect many people. Furthermore, acquisition officers feel even stronger about the lack of significance in their job: their job just doesn't affect others.

Table 21 - Task Significance Questions Comparison

Factor/Question	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
Task Significance	5.03	1.44	5.85	1.23	243.68***
I19	5.15	1.56	6.01	1.27	252.68***
I27	4.91	1.53	5.67	1.38	170.53***
	*p<.05	**p<.01	***p<.001		

Task Autonomy. Table 22 presents the results of the analysis of the individual questions which contribute to the Task Autonomy factor. These four questions, designated I20, I21, I30, and I31, were stated as follows in the OAP survey:

I20) To what extent does your job provide a great deal of freedom and independence in scheduling of your work?

I21) To what extent does your job provide a great deal of freedom and independence in selecting you own procedures to accomplish it?

I30) To what extent does your job give you freedom to do your work as you see fit?

I31) To what extent are you allowed to make the major decisions required to perform your job well?

As Table 22 indicates acquisition officers view their overall task autonomy at about the same level as other Air Force officers. However, a detailed analysis of the specific questions which contribute to the Task Autonomy factor shows that acquisition officers have significantly less ability to

make major decisions in order to perform their job well. The two task autonomy questions (I21 and I30) indicate that acquisition officers have roughly the same freedom as other officers in order to accomplish their assigned work as viewed appropriate. Also, question I20 indicates the acquisition officer has more freedom to schedule work than other Air Force officers. Overall, the average of these four questions results in the overall Task Autonomy factor being roughly the same for both comparison groups.

Table 22 - Task Autonomy Questions Comparison

Factor/Question	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
Task Autonomy	4.56	1.23	4.59	1.36	0.31
I20	4.75	1.57	4.42	1.82	-18.51***
I21	4.63	1.46	4.55	1.63	-1.45
I30	4.60	1.33	4.62	1.51	0.06
I31	4.24	1.48	4.77	1.50	68.83***

\*p<.05      \*\*p<.01      \*\*\*p<.001

Job Feedback. Table 23 presents the results of the analysis of the individual questions which contribute to the Skill Variety factor. These two questions, designated I17 and I29, were stated as follows in the OAP survey:

I22) To what extent are you able to determine how well you are doing your job without feedback from anyone else?

I26) To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?

The results of an analysis of the questions which contribute to the Job Feedback factor, see Table 23, indicate that acquisition officers have less chance of determining when they have performed their job well compared to other officers (I22). Acquisition officers also have about the same significantly less degree of responsibility for the work which they have performed.

Table 23 - Job Feedback Questions Comparison

Factor/Question	Acquisition Officers		Other Officers		F
	Mean	SD	Mean	SD	
Job Feedback	4.51	1.21	4.94	1.17	72.94***
I22	4.18	1.37	4.58	1.37	46.18***
I26	4.84	1.35	5.30	1.30	68.36***

\*p<.05      \*\*p<.01      \*\*\*p<.001

#### Chapter Summary

The results presented in this chapter have been a statistical comparison of Air Force Systems Command acquisition officers and other officers in order to quantify the job attitudes of AFSC acquisition officers. Specific job characteristics and subsequent OAP questions were analyzed to identify any possible reasons for divergent job attitudes and

potential areas for improvement. Eighteen of the 21 OAP factors were found to be significantly lower for AFSC acquisition officers. Clearly, AFSC acquisition officers have less favorable perceptions of their general work environment than do other Air Force officers. Chapters five and six present some theoretical implications and discussion in view of the results of this chapter.

## V. Theoretical Implications

### Chapter Overview

This chapter focuses on possible reasons for the job attitudes of Air Force Systems Command acquisition officers based on the theoretical constructs discussed in Chapter 2. The Organizational Functions and Work Group Process structures of the Organizational Assessment Package and Hackman and Oldham's Job Characteristics Model are specifically addressed.

### Organizational Functions of the OAP

The organizational functions of the OAP were the Work Itself, Job Enrichment, Work Group Process, and Work Group Output (see Chapter 2). These four functions were further defined by 21 various contributing factors. 18 of these 21 factors were found to be significantly lower for Air Force Systems Command acquisition officers. Therefore, beyond the fact that all four functions contribute to the negative job attitudes of acquisition officers, the specific impact based on organizational function is rather difficult. However, all 21 OAP factors were individually discussed in Chapter 4.

As a means of further delineating the cause of the negative job attitudes of AFSC acquisition officers, the input job characteristics of the Work Group Process structure of the OAP and more specifically the five "core" job

characteristics of Hackman and Oldham's Job Characteristic Model were analyzed.

Work Group Process Structure of the OAP

This organization of the OAP places the following 10 contributing factors into the input process of the Work Group Process:

- Job Performance Goals
- Skill Variety
- Task Identity
- Task Significance
- Job Feedback
- Task Autonomy
- Work Repetition
- Need for Enrichment
- Desired Repetitive/Easy Tasks
- Job Related Training

Eight of these 10 contributing factors were found to be significantly lower for AFSC acquisitions officers compared to all the other Air Force officers represented in the OAP. The other two factors (Need for Enrichment and Task Autonomy) were found to be similar for both comparison groups.

Since these 10 factors represent the job characteristics which input into the Work Group Process of the acquisition officer career field and were found to be statistically lower than responses from other Air Force officers, the outputs of the acquisition career force should be lower. In fact, all but one of the other OAP factors were found to be significantly lower for AFSC acquisition officers. AFSC acquisition officers apparently have significantly less pride, advancement/recognition opportunities, perceived

productivity, job related satisfaction, and favorable general organization climate.

#### Job Characteristics Model

Included in the 10 contributing factors of the input process of the Work Group Process organization of the OAP are the five 'core' job characteristics of the Hackman and Oldham's Job Characteristic Model. These characteristics are:

Skill Variety  
Task Identity  
Task Significance  
Job Feedback  
Task Autonomy

If the level of these core job characteristics is high, the outcomes of the Job Characteristic Model will be high internal motivation, general job satisfaction, organizational effectiveness, low absenteeism and low turnover (Hackman and Oldham, 1980:89). However, as indicated in Chapter 4, the four core job characteristic factors of skill variety, task identity, task significance, and job feedback, were statistically significantly lower for AFSC acquisition officers compared to other Air Force officers. Therefore, Hackman and Oldham's Job Characteristics Model indicates that AFSC acquisition officers should have significantly lower job attitudes.

Also, the job characteristics theory can be summarized with the Motivating Potential Score (MPS). As Table 24 indicates, AFSC acquisition officers have a lower MPS than

other Air Force officers. This lower MPS is also indicative of the negative job attitudes of acquisition career force.

Table 24 - Motivating Potential Score

	Acquisition Officers	Other Officers
MPS	100.8	125.5

The MPS scores shown in Table 24 were calculated using the mean values of the "core" job characteristics presented in Chapter 4 utilizing the following empirical equation:

$$\text{MPS} = ((\text{Skill Variety} + \text{Task Identity} + \text{Task Significance})/3) \times \text{Task Autonomy} \times \text{Job Feedback}$$

[Hackman and Oldham, 1975:160]

As a point of interest, the national norm for the Motivating Potential Score is 156.0 (Geiser, 1986:13). Not only is the MPS of AFSC acquisition officers much lower than other Air Force officers, the MPS of Air Force officers as a group is lower than the national norm for middle management jobs. This is true, but the purpose of this study was a comparison of AFSC acquisition officer and other Air Force officer's job attitudes.

#### Chapter Summary

The theoretical implications of this study's results show that the job attitudes of Air Force Systems Command

acquisition officers will be negatively effected. The fact that 8 of the 10 contributing factors of the OAP which input into the Work Group Process structure of the OAP are significantly lower for acquisition officers shows that the outputs of the acquisition career force should be less than that of the outputs of other Air Force officers. Also, the significantly lower scores in the "core" job characteristics of the Job Characteristics Model and the comparatively lower Motivating Potential Score of acquisition officers is indicative of an acquisition career force with comparatively negative job attitudes.

## VI. Discussion and Recommendations

### Chapter Overview

This chapter discusses the results of this study and recommends possible actions to help alleviate the significantly lower job attitudes of Air Force Systems Command acquisition officers.

### Discussion

The results of this study empirically verified that the job attitudes of Air Force Systems Command acquisition officers are significantly lower than other Air Force officers. In virtually all the OAP factors, acquisition officers were found to be statistically lower compared to other officers, with only three exceptions. These results not only confirm the significantly lower job attitudes of AFSC acquisition officers, but show that practically every OAP job factor suggest facets of the acquisition officer's work group environment that will contribute to low job outputs.

In reviewing these results, one must keep in mind that the OAP survey responses were generated from the perceptions of the individual respondents. Thus, the low job outputs which stem from low job attitudes may just be perceived by the individual acquisition officers. However, a significant number of perceived low job attitudes and outputs is indicative of a problem that must be delineated and solved.

Furthermore, the typical AFSC acquisition officer's work environment is not one of simple continuity in job definition. Acquisition officer job responsibilities range from simple clerical or administrative duties to the management of multi-billion dollar programs. A perceived dichotomy in the job an individual acquisition officer actually performs and the job which should be performed, will also contribute to lower job attitudes.

Pinpointing the precise cause of the significantly lower job attitudes of AFSC acquisition officers and subsequent diminished outputs is difficult to ascertain. The causes are widespread and complex. In order to determine the job attitudes of AFSC acquisition officers, this study placed emphasis specifically on the job characteristics of the AFSC acquisition officer.

Other areas of the AFSC acquisition officer's work environment, which are beyond the scope of this study, will also have significant impact on job attitudes. For example, some acquisition officers work in matrix organizations which inherently have problems with unclear authority, high interpersonal conflict, and time consuming task completion, which would all help contribute to low job attitudes (Daft and Steers, 1986:384). Also, AFSC acquisition officers who do manage projects face problems which stem directly from a project's characteristics of high uncertainty, high competition for organizational resources, and one time missions or tasks (Adams and Martin, 1987:1-2). Different

projects, each with its own inherent characteristics, will have different effects on the job attitudes of AFSC acquisition officers.

However, project management evolves around tasks which are unique, important to their organization, require broad and/or specialized skills, and have high significance to their organization (Adams and Martin, 1987:2). Such characteristics should theoretically yield high job satisfaction, motivation, and job attitudes for all AFSC acquisition officers. Viewing the results of this study, one could speculate that a significant number of AFSC acquisition officers perceive that they are not managing projects or are performing insignificant tasks.

The root of this speculation stems from the fact that all AFSC acquisition officers do not manage projects. Typically, junior AFSC acquisition officers are not initially placed into a project management position. They are placed into positions which support more senior acquisition officers who may indeed manage projects. Dependent upon numerous factors such as individual qualifications and experience, organizational needs, and supervisor preference, junior AFSC acquisition officers may manage a piece or subsystem of a project or be assigned simple clerical or administrative duties.

The significantly lower job attitudes of AFSC acquisition officers compared to other officers is a culmination of many such concepts, but this study placed

emphasis on the demographic variables and job characteristics of AFSC acquisition officers. It was found that not only do demographic variables suggest possible causes for the low job attitudes of AFSC acquisition officers, 18 of the 21 factors represented in the Organizational Assessment Package are indicative of possible causes.

In light of these results, it is important to review what this study has learned and what has yet to be learned. This study proposed to answer three questions:

- 1) Is there a significant difference between the job attitudes of AFSC acquisition officers and other Air Force Officers?
- 2) What specific job characteristics cause the positive or negative job attitudes of AFSC acquisition officers?

3) What potential areas are there for improvement in the acquisition officer career field? Can those job characteristics which cause negative job attitudes be corrected or alleviated?

First of all, it was shown that AFSC acquisition officers measured significantly lower in 18 of the 21 OAP factors: there were only three factors which do not contribute to the negative job attitudes of AFSC acquisition officers (Task Autonomy, Need for Enrichment, and Work Support). This unequivocally indicates that there is a significant difference between the job attitudes of AFSC acquisition officers and other Air Force Officers. All 18 of

these factors are representative of possible causes for the negative job attitudes of AFSC acquisition officers.

Also, the theoretical impact of the input factors of the OAP and the five "core" job characteristics represented in the OAP indicate there are potential areas for improvement in the input phase of the work group process of acquisition officers. Further, the analysis of the OAP questions which contribute to the five "core" job characteristics yielded specific areas for improvement in the acquisition career field in order to help alleviate the negative job attitudes of AFSC acquisition officers.

#### Recommendations

The results of the analysis of the five "core" job characteristics represented in the OAP and the demographic results present specific shortcomings in the work performed and experience level of AFSC acquisition officers. These shortcomings are: 1) Too few talents and skills required. 2) Little opportunity for involvement in a whole unit of work. 3) Unmeaningful or insignificant jobs. 4) Few decision making opportunities. 5) Poor job feedback. 6) Relatively inexperienced acquisition officers.

One must keep in mind that AFSC acquisition officers who do manage projects should not perceive a majority of these shortcomings in their job. As stated earlier, project management evolves around tasks which characteristically do not contain such shortcomings.

All six of these shortcomings are contributors to three general areas in which steps can be taken to help alleviate the negative job attitudes of AFSC acquisition officers. These three areas can be delineated utilizing the critical psychological states of Hackman and Oldham's Job Characteristics Model; the experienced meaningfulness of the work, the experienced responsibility for outcomes of the work, and knowledge of the actual results of the work activities (Hackman and Oldham, 1980:83). If these critical psychological states are satisfactorily fulfilled from the perspective of the AFSC acquisition officer, their job attitudes will improve.

Specific recommendations to help alleviate the relatively negative job attitudes of AFSC acquisition officers are presented for each of these critical psychological states:

1. The experienced meaningfulness of AFSC acquisition officer's work is severely hampered by the relatively inexperienced acquisition career force comprised of a high percentage of 'junior' acquisition officers simply not being utilized to their full expectations and abilities. The AFSC acquisition officer's job requires too few talents and skills, contains too little involvement in a whole unit of work, and has little significance. In a career field whose primary role is the management of various programs necessary for the defense of our country, this is hard to fathom. The meaningfulness of the work of an AFSC

acquisition officer is obviously immense. If every effort were made by AFSC senior leadership to ensure junior AFSC acquisition officers do indeed manage a project, a sub-system of a program, or other identifiable whole unit of significant work as soon as the junior AFSC acquisition officer is capable, the meaningfulness of their work will be realized. If the organizational environment is such that clerical or administrative duties are voluminous, do not assign junior AFSC acquisition officers such responsibilities for an extended period of time under the pretense of training for future project management responsibilities: assign or hire administrative personnel.

2. The experienced responsibility for outcomes in an AFSC acquisition officer's work is not a real problem. The amount of autonomy in an individual's work was the primary determinant of this critical psychological state. AFSC acquisition officers were found to have approximately the same job autonomy as other Air Force officers. However, AFSC acquisition officers were found to have few decision making opportunities. Again, if junior AFSC acquisition officers are ensured the responsibilities of managing a project, a sub-system of a program, or other identifiable whole unit of significant work as soon as possible this critical psychological state will be improved.

3. The recent implementation of the new Officer Evaluation System (OES) should help alleviate the area of poor job feedback and improve the knowledge of actual results

of individual AFSC acquisition officer's work activities. The portion of the OES which incorporates direct supervisor feedback should be emphasized by every supervisor of junior AFSC acquisition officers. If junior AFSC acquisition officers are being trained for future project management responsibilities, the importance of their present job as a contributor to their development in the project management career field must be clarified and emphasized.

4. In addition to enhancing the critical psychological states of AFSC acquisition officers in order to improve their low job attitudes, the large percentage of AFSC junior acquisition officers should be induced to remain in the project management career field. In time, the high percentage of senior AFSC acquisition officers will diminish. Considering the stratification in the experience level of AFSC acquisition officers represented in this study's data source, Air Force Systems Command is going to need experienced acquisition officers in the future. AFMPC and AFSC should implement the necessary programs, such as financial bonuses, incentives, or exemption from any force reduction measures, in order to retain junior AFSC acquisition officers and prevent future manpower imbalances in the project management career field. Also, the opportunities for increased project management responsibilities should be advertised in AFSC's Acquisition Career Development Program and recognized with promotional

opportunities. The level of experienced acquisition officers to manage AFSC projects must be sustained.

#### Future Research

This study and previous studies have determined the negative job attitudes of AFSC acquisition officers. The next step would be to implement corrective actions based on such existing research. Future research should supplement existing research and consist of the following:

1. Since the OAP was last administered in 1985, an update of job attitudinal data for AFSC acquisition officers is necessary. This update may reveal any changes in recent acquisition officer manpower structure and job attitudes.
2. Since 18 of the 21 OAP factors and 4 of the five "core" job characteristics were found to be significantly lower for AFSC acquisition officers, many areas of improvement in the acquisition career field exist. A study on the possible job redesign and/or a determination of the actual project management utilization of AFSC acquisition officers is definitely warranted.
3. This study made recommendations on potential areas for improvement in the job attitudes of the "junior" AFSC acquisition officers. A study on the feasibility or necessity for improvement in the job attitudes of "senior" AFSC acquisition officers may be appropriate.

### Chapter Summary

This study has shown that Air Force Systems Command acquisition officers have relatively negative job attitudes. In nearly every OAP factor, AFSC acquisition officers measured significantly lower than other Air Force officers. These results were primarily due to the high number of inexperienced AFSC acquisition officers and the job characteristics of the work they perform. In order to help alleviate the present negative job attitudes of the acquisition career force, several recommendations and future research activities were presented.

An increased emphasis on the human factors of job attitudes, job satisfaction, and motivation is necessary in the acquisition career field. Lessening the negative job attitudes of AFSC acquisition officers is an absolute must in order to improve the outputs of Air Force Systems Command and the defense systems necessary for the protection of our country.

Appendix A: Organizational Assessment Package Survey

PRIVACY ACT STATEMENT

In accordance with paragraph 30, AFR 12-35, The Air Force Privacy Act Program, the following information about this survey is provided:

- a. Authority: 10 U.S.C., 8012, Secretary of the Air Force: Powers and Duties, Delegation by Compensation E.O. 9397, 22 Nov 43, Numbering System for Federal Accounts Relating to Individual Persons.
- b. Principal Purpose: The survey is being conducted to assess your organization from a leadership and management perspective.
- c. Routine Uses: Information provided by respondents will be treated confidentially. The averaged data will be used for organizational strength and weakness identification and Air Force wide research and development purposes.
- d. Participation: Response to this survey is voluntary. Your cooperation in this effort is appreciated.

(PLEASE DO NOT TEAR, MARK ON, OR OTHERWISE DAMAGE THIS BOOKLET)

EXPIRATION DATE: 31 Oct 1981

SCN 81-14

#### GENERAL INFORMATION

The leaders of your organization are genuinely interested in improving the overall conditions within their areas of responsibility. Providing a more satisfying Air Force way of life and increasing organizational effectiveness are also goals. One method of reaching these goals is by continual refinement of the management processes of the Air Force. Areas of concern include job related issues such as leadership and management; training and utilization; motivation of and concern for people; and the communication process.

This survey is intended to provide a means of identifying areas within your organization needing the greatest emphasis in the immediate future. You will be asked questions about your job, work group, supervisor, and organization. For the results to be useful, it is important that you respond to each statement thoughtfully, honestly, and as frankly as possible. Remember, this is not a test, there are no right or wrong responses.

Your completed response sheet will be processed by automated equipment, and be summarized in statistical form. Your individual response will remain confidential, as it will be combined with the responses of many other persons, and used for organizational feedback and possibly Air Force wide studies.

#### KEY WORDS

The following should be considered as key words throughout the survey.

- Supervisor: The person to whom you report directly.
- Work Group: All persons who report to the same supervisor that you do.
- Organization: Your squadron. However, if you work in staff/support agencies, the division or directorate would be your organization.

## INSTRUCTIONS

1. All statements may be answered by filling in the appropriate spaces on the response sheet provided. If you do not find a response that fits your case exactly, use the one that is the closest to the way you feel.
2. Be sure that you have completed Section 1 of the response sheet, as instructed by the survey administrator, before beginning Section 2.
3. Please use the pencil provided, and observe the following:
  - Make heavy black marks that fill the spaces.
  - Erase cleanly any responses you wish to change.
  - Make no stray markings of any kind on the response sheet.
  - Do not staple, fold or tear the response sheet.
  - Do not make any markings on the survey booklet.
4. The response sheet has a 0-7 scale. The survey statements normally require a 1-7 response. Use the zero (0) response only if the statement truly does not apply to your situation. Statements are responded to by marking the appropriate space on the response sheet as in the following example:

Using the scale below, evaluate the sample statement.

1 = Strongly disagree	5 = Slightly agree
2 = Moderately disagree	6 = Moderately agree
3 = Slightly disagree	7 = Strongly agree
4 = Neither agree nor disagree	

Sample Statement: The information your work group receives from other work groups is helpful.

If you moderately agree with the sample statement, you would blacken the oval (6) on the response sheet.

NA

Sample Response: (0) (1) (2) (3) (4) (5) (6) (7)

5. When you have completed the survey, please turn in the survey materials as instructed in the introduction.

## BACKGROUND INFORMATION

This section of the survey concerns your background. The information requested is to insure that the groups you belong to area accurately represented and not to identify you as an individual. Please uses the separate response sheet and darken the oval which corresponds to your response to each question.

1. Total years in the Air Force:

1. Less than 1 year.
2. More that 1 year, less than 2 years.
3. More than 2 years, less than 3 years.
4. More than 3 years, less than 4 years.
5. More than 4 years, less than 8 years.
6. More than 8 years, less than 12 years.
7. More than 12 years.

2. Total months in present career field:

1. Less than 1 month.
2. More than 1 month, less than 6 months.
3. More than 6 months, less than 12 months.
4. More than 12 months, less than 18 months.
5. More than 18 months, less than 24 months.
6. More than 24 months, less than 36 months.
7. More than 36 months.

3. Total months at this station:

1. Less than 1 month.
2. More than 1 month, less than 6 months.
3. More than 6 months, less than 12 months.
4. More than 12 months, less than 18 months.
5. More than 18 months, less than 24 months.
6. More than 24 months, less than 36 months.
7. More than 36 months.

4. Total months in present position:

1. Less than 1 month.
2. More than 1 month, less than 6 months.
3. More than 6 months, less than 12 months.
4. More than 12 months, less than 18 months.
5. More than 18 months, less than 24 months.
6. More than 24 months, less than 36 months.
7. More than 36 months.

5. Your Ethnic Group is:

1. American Indian or Alaskan Native
2. Asian or Pacific Islander
3. Black, not of Hispanic Origin
4. Hispanic
5. White, not of Hispanic Origin
6. Other

6. Your highest education level obtained is:

1. Non-high school graduate
2. High school graduate or GED
3. Less than 2 years college
4. Two years or more college
5. Bachelors Degree
6. Masters Degree
7. Doctoral Degree

7. Highest level of professional military education (residence or correspondence):

0. None or not applicable
1. NCO Orientation Course or USAF Supervisor Course(NCO Phase 1 or 2)
2. NCO Leadership School (NCO Phase 3)
3. NCO Academy (NCO Phase 4)
4. Senior NCO Academy (NCO Phase 5)
5. Squadron Officer School
6. Intermediate Service School (i.e. ACSC, AFSC)
7. Senior Service School (i.e. AWC, ICAF, NWC)

8. How many people do you directly supervise?

1. None	5. 4 to 5
2. 1	6. 6 to 8
3. 2	7. 9 or more
4. 3	

9. For how many people do you write performance reports?

1. None	5. 4 to 5
2. 1	6. 6 to 8
3. 2	7. 9 or more
4. 3	

10. Does your supervisor actually write your performance reports?

1. yes                    2. no                    3. not sure

11. Which of the following "best" describes your marital status?

0. Not Married
1. Married: Spouse is a civilian employed outside home.
2. Married: Spouse is a civilian employed outside home- geographically separated.
3. Married: Spouse not employed outside home
4. Married: Spouse not employed outside home-geographically separated.
5. Married: Spouse is a military member.
6. Married: Spouse is a military member-geographically separated.
7. Single Parent.

12. What is your usual work schedule?

1. Day shift, normally stable hours.
2. Swing Shift (about 1600-2400)
3. Mid shift (about 2400-0800)
4. Rotating shift schedule
5. Day or shift work with irregular hours.
6. Frequent TDY/travel or frequently on-call to report to work.
7. Crew schedule.

13. How often does your supervisor hold group meetings?

1. Never	4. Weekly
2. Occasionally	5. Daily
3. Monthly	6. Continuously

14. How often are group meetings used to solve problems and establish goals?

1. Never	3. About half the time
2. Occasionally	4. All of the time

15. What is your aeronautical rating and current status?

1. Nonrated, not on aircrew	3. Rated, in crew/operations job
2. Nonrated, now on aircrew	4. Rated, in support job

16. Which of the following best describes your career or employment intentions?

1. Planning to retire in the next 12 months
2. Will continue in/with the Air Force as a career
3. Will most likely continue in/with the Air Force as a career
4. May continue in/with the Air Force
5. Will most likely not make the Air Force a career
6. Will separate/terminate from the Air Force as soon as possible

## JOB INVENTORY

Below are items which relate to your job. Read each statement carefully and then decide to what extent the statement is true of your job. Indicate the extent to which the statement is true for your job by choosing the phrase which best represents your job.

1 = Not at all

5 = To a fairly large extent

2 = To a very little extent

6 = To a great extent

3 = To a little extent

7 = To a very great extent

4 = To a moderate extent

Select the corresponding number for each question and enter it on the separate response sheet.

17. To what extent does your job require you to do many different things, using a variety of your talents and skills?
18. To what extent does your job involve doing a whole task or unit of work?
19. To what extent is your job significant, in that it affects others in some important way?
20. To what extent does your job provide a great deal of freedom and independence in scheduling your work?
21. To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?
22. To what extent are you able to determine how well you are doing your job without feedback from anyone else?
23. To what extent do additional duties interfere with the performance of your primary job?
24. To what extent do you have adequate tools and equipment to accomplish your job?
25. To what extent is the amount of work space provided adequate?

1 = Not at all  
2 = To a very little extent  
3 = To a little extent  
4 = To a moderate extent

5 = To a fairly large extent  
6 = To a great extent  
7 = To a very great extent

26. To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?
27. To what extent does doing your job well affect a lot of people?
28. To what extent does your job provide you with the chance to finish completely the piece of work you have begun?
29. To what extent does your job require you to use a number of complex skills?
30. To what extent does your job give you freedom to do your work as you see fit?
31. To what extent are you allowed to make the major decisions required to perform your job well?
32. To what extent are you proud of your job?
33. To what extent do you feel accountable to your supervisor in accomplishing your job?
34. To what extent do you know exactly what is expected of you in performing your job?
35. To what extent are your job performance goals difficult to accomplish?
36. To what extent are your job performance goals clear?
37. To what extent are your job performance goals specific?
38. To what extent are your job performance goals realistic?
39. To what extent do you perform that same tasks repeatedly within a short period of time?

1 = Not at all  
2 = To a very little extent  
3 = To a little extent  
4 = To a moderate extent

5 = To a fairly large extent  
6 = To a great extent  
7 = To a very great extent

40. To what extent are faced with the same type of problem on a weekly basis?
41. To what extent are you aware of promotion/advancement opportunities that affect you?
42. To what extent do co-workers in your work group maintain high standards of performance?
43. To what extent do you have the opportunity to progress up your career ladder?
44. To what extent are you being prepared to accept increased responsibility?
45. To what extent do people who perform well receive recognition?
46. To what extent does your work give you a feeling of pride?
47. To what extent do you have the opportunity to learn skills which will improve your promotion potential?
48. To what extent do you have the necessary supplies to accomplish your job?
49. To what extent do details (tasks not covered by primary or additional duty descriptions) interfere with the performance of your primary job?
50. To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

### JOB DESIRES

The statements below deal with job related characteristics. Read each statement and choose the response which best represents how much you would like to have each characteristic in your job.

In my job, I would like to have the characteristics described:

1 = not at all	5 = a large amount
2 = A slight amount	6 = A very large amount
3 = A moderate amount	7 = An extremely large amount
4 = A fairly large amount	

51. Opportunities to have independence in my work.
52. A job that is meaningful.
53. An opportunity for personal growth in my job.
54. Opportunities in my work to use my skills.
55. Opportunities to perform a variety of tasks.
56. A job in which tasks are repetitive.
57. A job in which tasks are relatively easy to accomplish.

## SUPERVISION

The statements below describe characteristics of managers or supervisors  
Indicate your agreement by choosing the phrase which best represents your  
attitude concerning your supervisor.

1 = Strongly disagree	5 = Slightly agree
2 = Moderately disagree	6 = Moderately agree
3 = Slightly disagree	7 = Strongly agree
4 = Neither agree nor disagree	

Select the corresponding number for each statement and enter it on the  
separate response sheet.

58. My supervisor is a good planner.
59. My supervisor sets high performance standards.
60. My supervisor encourages teamwork.
61. My supervisor represents the group at all times.
62. My supervisor establishes good work procedures.
63. My supervisor has made his responsibilities clear to the group.
64. My supervisor fully explains procedures to each group member.
65. My supervisor performs well under pressure.
66. My supervisor takes time to help me when needed.
67. My supervisor asks members for their ideas on task improvements.
68. My supervisor explains how my job contributes to the overall mission.
69. My supervisor helps me set specific goals
70. My supervisor lets me know when I am doing a good job
71. My supervisor lets me know when I am doing a poor job

72. My supervisor always helps me improve my performance.
73. My supervisor insures that I get job related training when needed.
74. My job performance has improved due to feedback received from my supervisor.
75. When I need technical advice, I usually go to my supervisor.
76. My supervisor frequently gives me feedback on how well I am doing my job

#### WORK GROUP PRODUCTIVITY

The statements below deal with the output of your work group. The term "your work group" refers to you and your co-workers who work for the same supervisor. Indicate your agreement with the statement by selecting the phrase which best expresses your opinion.

1 = Strongly disagree	4 = Neither agree nor disagree
2 = Moderately disagree	5 = Slightly agree
3 = Slightly disagree	6 = Moderately agree
	7 = Strongly agree

Select the corresponding number for each statement and enter it on the separate response sheet.

77. The quantity of output of your work group is very high.
78. The quality of output of your work group is very high.
79. When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations.
80. Your work group always gets maximum output from available resources (e.g., personnel and material).
81. Your work group's performance in comparison to similar work groups is very high.

## ORGANIZATION CLIMATE

Below are items which describe characteristics of your organization. The term "your organization" refers to your squadron or staff agency. Indicate your agreement by choosing the phrase which best represents your opinion concerning your organization.

1 = Strongly disagree	5 = Slightly agree
2 = Moderately disagree	6 = Moderately agree
3 = Slightly disagree	7 = Strongly agree
4 = Neither agree nor disagree	

Select the corresponding number for each item and enter it on the separate response sheet.

82. Ideas developed by my work group are readily accepted by management personnel above my supervisor.
83. My organization provides adequate information to my work group
85. My work group is usually aware of important events and situations.
86. My complaints are aired satisfactorily.
87. My organization is very interested in the attitudes of the group member toward their jobs
88. My organization has a very strong interest in the welfare of its people
89. I am very proud to work for this organization.
90. I feel responsible to my organization in accomplishing its mission.
91. The information in my organization is widely shared so that those need it have it available.
92. Personnel in my unit are recognized for outstanding performance.
93. I am usually given the opportunity to show or demonstrate my work to others

1 = Strongly disagree	5 = Slightly agree
2 = Moderately disagree	6 = Moderately agree
3 = Slightly disagree	7 = Strongly agree
4 = Neither agree nor disagree	

94. There is a high spirit of teamwork among my co-workers.
95. There is outstanding cooperation between work groups of my organization.
96. My organization has clear-cut goals.
97. I feel motivated to contribute my best efforts to the mission of my organization.
98. My organization rewards individuals based on performance.
99. The goals of my organization are reasonable.
100. My organization provides accurate information to my work group.

## JOB RELATED ISSUES

The items below are used to determine how satisfied you are with specific job related issues. Indicate your degree of satisfaction or dissatisfaction with each issue by choosing the most appropriate phrase.

1 = Extremely dissatisfied	5 = Slightly satisfied
2 = Moderately dissatisfied	6 = Moderately satisfied
3 = Slightly dissatisfied	7 = Extremely satisfied
4 = Neither satisfied nor dissatisfied	

Select the corresponding number for each question and enter it on the separate response sheet.

### 101. Feeling of Helpfulness

The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others

### 102. Co-Worker Relationship

My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers

### 103. Family Attitude Toward Job

The recognition and the pride my family has in the work I do

### 104. On-the-Job Training (OJT)

The OJT instructional methods and instructors' competence

### 105. Technical Training (Other than OJT)

The technical training I have received to perform my current job

### 106. Work Schedule

My work schedule, flexibility and regularity of my work schedule; the number of hours I work per week

1 = Extremely dissatisfied  
2 = Moderately dissatisfied  
3 = Slightly dissatisfied  
4 = Neither satisfied nor dissatisfied

5 = Slightly satisfied  
6 = Moderately satisfied  
7 = Extremely satisfied

107. Job Security

108. Acquired Valuable Skills

The chance to acquire valuable skills in my job which prepare me for future opportunities.

109. My Job as a Whole

Appendix B: Organizational Assessment Package Survey  
Factors and Variables

ORGANIZATIONAL ASSESSMENT  
PACKAGE SURVEY

FACTORS  
AND  
VARIABLES

January 1986

LEADERSHIP AND MANAGEMENT DEVELOPMENT CENTER  
AIR UNIVERSITY  
Maxwell Air Force Base, Alabama 36112-5712

## Factor and Variables of the Organizational Assessment Package

The OAP is a 109-item survey questionnaire designed jointly by the Air Force Human Resources Laboratory and the Leadership and Management Development Center (LMDC) and is used to aid LMDC in its missions to: (a) conduct research on Air Force system issues using information in the OAP database, (b) provide leadership and management training, and (c) provide management consultation service to Air Force commanders upon request.

Allowable responses to the attitudinal items on the survey range from 1 (low) to 7 (high). The attitudinal items are grouped into 25 factors that address such areas as the job itself, management and supervision, communication, and performance in the organization. Each data record consists of 7 externally coded descriptors and 24 demographic items as well as the responses to the 93 attitudinal items.

The factors measured by the OAP are grouped into a systems model to assess three aspects of a work group: input, process, and output (adapted from McGrath's model).

Input. In LMDC's adaptation of the model, input is comprised of demographics, work itself, and job enrichment.

A. Demographics. Descriptive or background information about the respondents to the OAP survey.

B. Work Itself. The work itself has to do with the task properties (technologies) and environmental conditions of the job. It assesses the patterns of characteristics members bring to the group or organization, and patterns of differentiation and integration among position and roles. The following OAP factors measure the work itself:

- 806 - Job Desires (Need For Enrichment)
- 810 - Job Performance Goals
- 812 - Task Characteristics
- 813 - Task Autonomy
- 814 - Work Repetition
- 816 - Desired Repetitive Easy Tasks
- 823 - Job Related Training
- Job Influences (not a statistical factor)

C. Job Enrichment. Measures the degree to which the job itself is interesting, meaningful, challenging, and responsible. The following OAP factors measure job enrichment:

- 800 - Skill Variety
- 801 - Task Identity
- 802 - Task Significance
- 804 - Job Feedback
- 806 - Need for Enrichment Index (Job Desires)
- 807 - Job Motivation Index
- 808 - OJI Total Score
- 809 - Job Motivation Index - Additive
- 825 - Motivation Potential Score

Work Group Process. The work group assesses the pattern of activity and interaction among the group members. The following OAP factors measures leadership and the work group process:

- 805 - Performance Barriers/Blockages (Work Support)

818 - Management and Supervision  
819 - Supervisory Communications Climate  
820 - Organizational Communications Climate  
    Work interferences (not a statistical factor)  
    Supervisory Assistance (not a statistical factor)

Work Group Output. Measures task performance, group development, and effects on group members. Assesses the quantity and quality of task performance and alteration of the group's relation to the environment. Assesses changes in positions and role patterns, and in the development of norms. Assesses changes on skills and attitudes, and effects on adjustment. The following OAP factors measure the work group output:

811 - Pride  
817 - Advancement/Recognition  
821 - Work Group Effectiveness (Perceived Productivity)  
822 - Job Related Satisfaction  
824 - General Organizational Climate

#### EXTERNALLY CODED DESCRIPTORS

Batch Number  
Julian Date of Survey  
Major Command  
Base Code  
Consultation Method  
Consultant Code  
Survey Version

(Note: These items are concatenated to each data record during EDP processing.)

DEMOGRAPHIC ITEMS (NOT A STATISTICAL FACTOR)

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
-	-	Supervisor's Code
-	-	Work Group Code
-	-	Sex
-	-	Your age is
-	-	You are (officer, enlisted, GS, etc.)
-	-	Your pay grade is
-	-	Primary AFSC
-	-	Duty AFSC

(Note: The above items are on the response sheet.)

001	-	(Not used)
002	-	(Not used)
003	-	Total years in the Air Force:

1. Less than 1 year
2. More than 1 year, less than 2 years
3. More than 2 years, less than 3 years
4. More than 3 years, less than 4 years
5. More than 4 years, less than 8 years
6. More than 8 years

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
004	2	<p>Total months in present career field:</p> <ol style="list-style-type: none"> <li>1. Less than 1 month</li> <li>2. More than 1 month, less than 6 months</li> <li>3. More than 6 months, less than 12 months</li> <li>4. More than 12 months, less than 18 months</li> <li>5. More than 18 months, less than 24 months</li> <li>6. More than 24 month, less than 36 months</li> <li>7. More than 36 months</li> </ol>
005	3	<p>Total months at this station:</p> <ol style="list-style-type: none"> <li>1. Less than 1 month</li> <li>2. More than 1 month, less than 6 months</li> <li>3. More than 6 months, less than 12 months</li> <li>4. More than 12 months, less than 18 months</li> <li>5. More than 18 months, less than 24 months</li> <li>6. More than 24 month, less than 36 months</li> <li>7. More than 36 months</li> </ol>
006	4	<p>Total months in present position:</p> <ol style="list-style-type: none"> <li>1. Less than 1 month</li> <li>2. More than 1 month, less than 6 months</li> <li>3. More than 6 months, less than 12 months</li> <li>4. More than 12 months, less than 18 months</li> <li>5. More than 18 months, less than 24 months</li> <li>6. More than 24 month, less than 36 months</li> <li>7. More than 36 months</li> </ol>
007	5	<p>Your Ethnic Group is:</p> <ol style="list-style-type: none"> <li>1. American Indian or Alaskan Native</li> <li>2. Asian or Pacific Islander</li> <li>3. Black, not of Hispanic Origin</li> <li>4. Hispanic</li> <li>5. White, not of Hispanic Origin</li> <li>6. Other</li> </ol>

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
008	11	<p>Which of the following "best" describes your marital status?</p> <ul style="list-style-type: none"> <li>0. Not married</li> <li>1. Married: Spouse is a civilian employed outside home.</li> <li>2. Married: Spouse is a civilian employed outside home - geographically separated.</li> <li>3. Married: Spouse not employed outside home.</li> <li>4. Married: Spouse not employed outside home - geographically separated.</li> <li>5. Married: Spouse is a military member</li> <li>6. Married: Spouse is a military member - geographically separated.</li> <li>7. Single parent.</li> </ul>
009	6	<p>Your highest education level obtained is:</p> <ul style="list-style-type: none"> <li>1. Non-high school graduate</li> <li>2. High school graduate or GED</li> <li>3. Less than two years college</li> <li>4. Two years or more college</li> <li>5. Bachelors Degree</li> <li>6. Masters Degree</li> </ul>
010	7	<p>Highest level of professional military education (residence or correspondence):</p> <ul style="list-style-type: none"> <li>0. None or not applicable</li> <li>1. NCO Orientation Course or USAF Supervisor Course (NCO Phase 1 or 2)</li> <li>2. NCO Leadership School (NCO Phase 3)</li> <li>3. NCO Academy (NCO Phase 4)</li> <li>5. Squadron Officer School</li> <li>6. Intermediate Service School (i.e., ACSC, AFSC)</li> <li>7. Senior Service School (i.e., AWC, ICAF, NWC)</li> </ul>

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
011	8	How many people do you directly supervise?
		1. None      5. 4 to 5 2. 1            6. 6 to 8 3. 2            7. 9 or more 4. 3
012	9	For how many people do you write performance reports?
		1. None      5. 4 to 5 2. 1            6. 6 to 8 3. 2            7. 9 or more 4. 3
013	10	Does your supervisor actually write your performance report?
		1. Yes        2. No        3. Not sure
014	11	Your work requires you to work primarily:
		1. Alone 2. With one or two people 3. As a small work group (3-5 people) 4. As a large work group (6 or more people) 5. Other
015	12	What is your usual work schedule?
		1. Day shift, normally stable hours 2. Swing shift (about 1600-2400) 3. Mid shift (about 2400-0800) 4. Rotating shift schedule 5. Day or shift work with irregular/unstable hours 6. Frequent TDY/travel or frequently on-call to report to work 7. Crew schedule

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
016	13	How often does your supervisor hold group meetings?
		1. Never                  4. Weekly 2. Occasionally        5. Daily 3. Monthly              6. Continuously
017	14	How often are group meetings used to solve problems and establish goals?
		1. Never                  3. About half the time 2. Occasionally        4. All of the time
018	15	What is your aeronautical rating and current status?
		1. Nonrated, not on aircrew 2. Nonrated, now on aircrew 3. Rated, in crew/operations job 4. Rated, in support job
019	16	Which of the following best describes your career or employment intentions?
		1. Planning to retire in the next 12 months 2. Will continue in/with the Air Force as a career 3. Will most likely continue in/with the Air Force 4. May continue in/with the Air Force 5. Will most likely not make the Air Force a career 6. Will separate/terminate from the Air Force as soon as possible.

NOTE: Variable 008, Statement 11 was added to the OAP on 19 Jan 80 and replaced variable 014 which appeared earlier. Although no longer used, Variable 014 is still shown because data collected from about 25,000 samples for this variable are still in the data base.

## FACTORS

Each 800 series factor consists of two or more variables which correspond to statements in the OAP. A mean score can be derived for each factor except 805, 807, 808, 809, and 825 by using a "straight average." The formula for computing the exceptions is indicated.

Factor 800 - Skill Variety: Measure the degree to which a job requires a variety of different tasks or activities in carrying out the work; involves the use of a number of different skills and talents of the worker; skills required are valued by the worker.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
201	17	To what extent does your job require you to do many different things, using a variety of your talents and skills?
212	29	To what extent does your job require you to use a number of complex skills?

Factor 801 - Task Identity: Measures the degree to which the job requires completion of a "whole" and identifiable piece of work from beginning to end.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
202	18	To what extent does your job involve doing a <u>whole task or unit of work</u> .

211      28      To what extent does your job provide you with a chance to finish completely the piece of work you have begun?

Factor 802 - Task Significance: Measures the degree to which the job has a substantial impact on the lives or work of others; the importance of the job.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
203	19	To what extent is your job significant in that it affects others in some important way?
210	27	To what extent does doing your job well affect a lot of people?

Factor 804 - Job Feedback: Measures the degree to which carrying out the work activities required by the job results in the worker obtaining clear and direct information about job outcomes or information on good and poor performance.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
272	22	To what extent are you able to determine how well you are doing your job without feedback from anyone else?
210	27	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?

Factor 805 - Work Support: Measures the degree to which work performance is hindered by additional duties, details, inadequate tools, equipment, or work space.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
206	23	To what extent do additional duties interfere with the performance of your primary job?
207	24	To what extent do you have adequate tools and equipment to accomplish your job?
208	25	To what extent is the amount of work space provided adequate?

Formula 18 - 206 + 207 + 208)/3

Factor 806 - Need For Enrichment Index (Job Desires): Has to do with job related characteristics (autonomy, personal growth, use of skills, etc.) that the individual would like in a job.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
------------------------	-------------------------	------------------

(In my job, I would like to have the characteristics described -- from "not at all" to "an extremely large amount")

249	51	Opportunities to have independence in my work.
250	52	A job that is meaningful.
251	53	The opportunity for personal growth in my job.

252	54	Opportunities in my work to use my skills.
253	55	Opportunities to perform a variety of tasks.

Factor 337 - Job Motivation Index: A composite index derived from the six job characteristics that reflects the overall "motivating potential" of a job; the degree to which a job will prompt high internal work motivation on the part of job incumbents.

Index is compute using the following factors:

- 800 Skill variety
- 801 Task identity
- 802 Task significance
- 805 Performance barriers/blockages
- 813 Task autonomy
- 804 Job feedback

Formula  $((800 + 801 + 802 + 805) / 4) * 813 * 804$

Factor 808 - OJI Total Score: Assesses one's perception of motivation provided by his or her job. This factor is a variation of a scale employed by other job motivation theorists.

Score is computed using the variables in the following formula:

Formula  $(V201 + V202 + V203 + V270 + V272 + 8 - V206 + V207 + V208 + V209 + V210 + V211 + V212 + V213)$

Factor 809 - Job Motivation Index ---- Additive: This factor is a variation of a scale employed by other job motivation theorists.

Index is computed using the following factors:

800	Skill variety
801	Task identity
802	Task significance
805	Performance barriers/blockages
813	Task autonomy
804	Work repetition

Formula  $((800 + 801 + 802 + 805) / 4) + 813 + 804$

Factor 810 - Job Performance Goals: Measures the extent to which job performance goals are clear, specific, realistic, understandable, and challenging.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
217	34	To what extent do you know exactly what is expected of you in performing your job?
218	35	To what extent are your job performance goals difficult to accomplish?
273	36	To what extent are your job performance goals clear?
274	37	To what extent are your job performance goals specific?
221	38	To what extent are your job performance goals realistic?

Factor 811 - Pride: Measures the pride in one's work

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
215	32	To what extent are you proud of your job?
275	46	To what extent does your work give you a feeling of pride?

Factor 812 - Task Characteristics: A combination of skill variety, task identity, task significance, and job feedback designed to measure several aspects of one's job.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
201	17	To what extent does your job require you to do many different things, using a variety of your talents and skills?
202	18	To what extent does your job involve doing a <u>whole task or unit of work</u> ?
203	19	To what extent is your job significant, in that it affects others in some important way?
272	22	To what extent are you able to determine how will you are doing your job without feedback from anyone else?
209	26	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?

210	27	To what extent does doing your job well affect a lot of people?
211	28	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?
212	29	To what extent does your job require you to use a number of complex skills.

Factor 813 - Task Autonomy: Measures the degree to which the job provides freedom to do the work as one sees fit; discretion in scheduling, decision making, and means for accomplishing a job.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
270	20	To what extent does your job provide a great deal of freedom and independence in scheduling your work?
271	21	To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?
213 do	30	To what extent does our job give you freedom to your own work as you see fit?
214	31	To what extent are you allowed to make the major decisions required to perform your job well?

Factor 814 - Work Repetition: Measures the extent to which one performs the same tasks or type of problems in his or her job on a regular basis

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
226	39	To what extent do you perform the same tasks repeatedly within a short period of time?
227	40	To what extent are you faced with the same type of problem on a weekly basis?

Factor 816 - Desired Repetitive Easy Tasks: Measures the extent to which one desires his or her job involve repetitive tasks or tasks that are easy to accomplish.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
255	56	A job in which tasks are repetitive.
258	57	A job in which tasks are relatively easy to accomplish.

Factor - Job Influence (Not a Statistical Factor):

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
216	33	To what extent do you feel accountable to your supervisor in accomplishing your job?
238	42	To what extent do co-workers in your work group maintain high standards of performance?

Factor 817 - Advancement/Recognition: Measures one's awareness of advancement and recognition, and feelings of being prepared (e.g., learning new skills for promotion).

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
234	41	To what extent are you aware of promotion and advancement opportunities that affect you?
239	43	To what extent do you have the opportunity to progress up your career ladder?
240	44	To what extent are you being prepared to accept increased responsibility?
241	45	To what extent do people who perform well receive recognition?
276	47	To what extent do you have the opportunity to learn skills which will improve your promotion potential?

Factor 818 - Management and Supervision (A): Measures the degree to which the worker has high performance standards and good work procedures. Measures support and guidance received, and the overall quality of supervision.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
404	58	My supervisor is a good planner.

405	59	My supervisor sets high performance standards.
410	60	My supervisor encourages team work.
411	61	My supervisor represents the group at all times.
412	62	My supervisor establishes good work procedures.
413	63	My supervisor has made his responsibilities clear to the group.
445	64	My supervisor fully explains procedures to each group member.
416	65	My supervisor performs well under pressure.

Factor Management and Supervision (F) (Not A Statistical Factor)

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
424	66	My supervisor takes time to help me when needed.
434	71	My supervisor lets me know when I am doing a poor job.
439	75	When I need technical advice, I usually go to my supervisor.

Factor 819 - Supervisory Communications Climate: Measures the degree to which the worker perceives that there is a good rapport with supervisor, that there is a good working environment, that innovation for task improvement is encouraged, and that rewards are based upon performance.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
426	67	My supervisor asks members for their ideas on task improvements.
428	68	My supervisor explains how my job contributes to the overall mission.
431	69	My supervisor helps me set specific goals.
433	70	My supervisor lets me know when I am doing a good job.
435	72	My supervisor always helps me improve my performance.
436	73	My supervisor insures that I get job related training when needed.
437	74	My job performance has improved due to feedback received from my supervisor.
442	76	My supervisor frequently give me feedback on how well I am doing my job.

Factor 820 - Organizational Communications Climate: Measures the degree to which the worker perceives that there is an open communications environment in the organization, and that adequate information is provided to accomplish the job.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
300	82	Ideas developed by my work group are readily accepted by management personnel above my supervisor.
301	83	My organization provides all the necessary information for me to do my job effectively.
302	84	My organization provides adequate information to my work group.
303	85	My work group is usually aware of important events and situations.
304	86	My complaints are aired satisfactorily
309	91	The information in my organization is widely shared so that those needing it have it available.
314	96	My organization has clear-cut goals
317	99	The goals of my organization are reasonable.
318	100	My organization provides accurate information to my work group.

Factor S21 - Work Group Effectiveness: Measures one's view of the quantity quality, and efficiency of work generated by his or her work group.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
259	77	The <u>quantity</u> of output of your work group is very high.

260	78	The <u>quality</u> of output of your work group is very high.
261	79	When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations.
264	80	Your work group always gets maximum output from available resources (e.g., personnel and material).
265	81	Your work group's performance in comparison similar work groups is very high.

Factor Work Interferences (Not A Statistical Factor): Identifies things that impede an individual's job performance.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
277	48	To what extent do you have the necessary supplies to accomplish your job?
278	49	To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job?
279	50	To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

Factor 322 - Job Related Satisfaction: Measures the degree to which the worker is generally satisfied with factors surrounding the job.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
705	101	<u>Feeling of Helpfulness</u> The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.
709	102	<u>Co-worker Relationships</u> My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
710	103	<u>Family Attitude Toward Job</u> The recognition and the pride my family has in the work I do.
717	106	<u>Work Schedule</u> My work schedule; flexibility and regularity of my work schedule, the number of hours I work per week.
718	107	<u>Job Security</u>
719	108	<u>Acquired Valuable Skills</u> The chance to acquire valuable skills in my job which prepare me for future opportunities.
723	109	<u>My Job as a Whole</u>

Factor 823 - Job Related Training: Measures the degree to which one is satisfied with on-the-job and technical training received.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
711	104	<u>On-the-Job Training (OJT)</u> The OJT instructional methods and instructors' competence.
712	105	<u>Technical Training (Other than OJT)</u> The technical training I have received to perform my current job.

Factor 824 - General Organizational Climate: Measures the Individual's perception of his or her organizational environment as a whole (i.e. spirit of teamwork, communications, organizational pride, etc.)

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
305	87	My organization is very interested in the attitudes of the group members toward their jobs.
306	88	My organization has a very strong interest in the welfare of its people.
307	89	I am very proud to work for this organization.
308	90	I feel responsible to my organization in accomplishing its mission.
310	92	Personnel in my unit are recognized for outstanding performance.

311        93        I am usually given the opportunity to show or demonstrate my work to others.

312        94        There is a high spirit of teamwork among my co-workers.

313        95        There is outstanding cooperation between work groups of my organization.

315        97        I feel motivated to contribute my best efforts to the mission of my organization.

316        98        My organization rewards individuals based on performance.

Factor 825 - Motivation Potential Score: This factor is another variation of a scale employed by other job motivation theorists. The score ranges between 1 and 343 with 109 being the Air Force average. Low scores indicate a poorly motivating job. Score is computed using the following factors.

- 800        Skill variety
- 801        Task identity
- 802        Task significance
- 804        Job feedback
- 813        Task autonomy

Formula       $((800 + 801 + 802)/3) * 813 * 804$

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VITA

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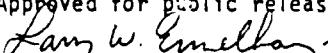
As an Air Force dependent, Capt McMahon grew up in many locations but graduated from high school in Rapid City South Dakota. Utilizing an AFROTC scholarship, Capt McMahon was commisioned a Second Lieutenant and received a Mechanical Engineering degree from South Dakota State University. Subsequently, Capt McMahon was assigned to Air Force Systems Command and stationed at Los Angeles Air Force Base (Space Division) to perform the duties of an acquisition officer. Following three and a half years of managing various projects, Capt McMahon was selected to attend the Air Force Institute of Technology and obtain a Masters of Science Degree in Systems Management.

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The purpose of this study was to compare the job attitudes of Air Force Systems Command (AFSC) acquisition officers and all other Air Force officers. The results of the Leadership and Management Development Center's Organizational Assessment Package (QAP) survey were used as the data source for this study. In order to determine how the job attitudes of AFSC acquisition officers compare with other Air Force officers, two comparison groups were extracted from this data source and statistically analyzed: one group was representative of AFSC acquisition officers and the other group was representative of all the other Air Force officers represented in the data source. In 18 of the 21 factors which describe the structure of the QAP, AFSC acquisition officers were found to be significantly lower than other Air Force officers. Also, the acquisition career field was found to be comprised of a large percentage of junior officers. These demographic results and the significantly lower job characteristics factors of the QAP were found to help cause the relatively negative job attitudes of AFSC acquisition officers.

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